

BookletChart™

Big Bay Point to Redridge

NOAA Chart 14964

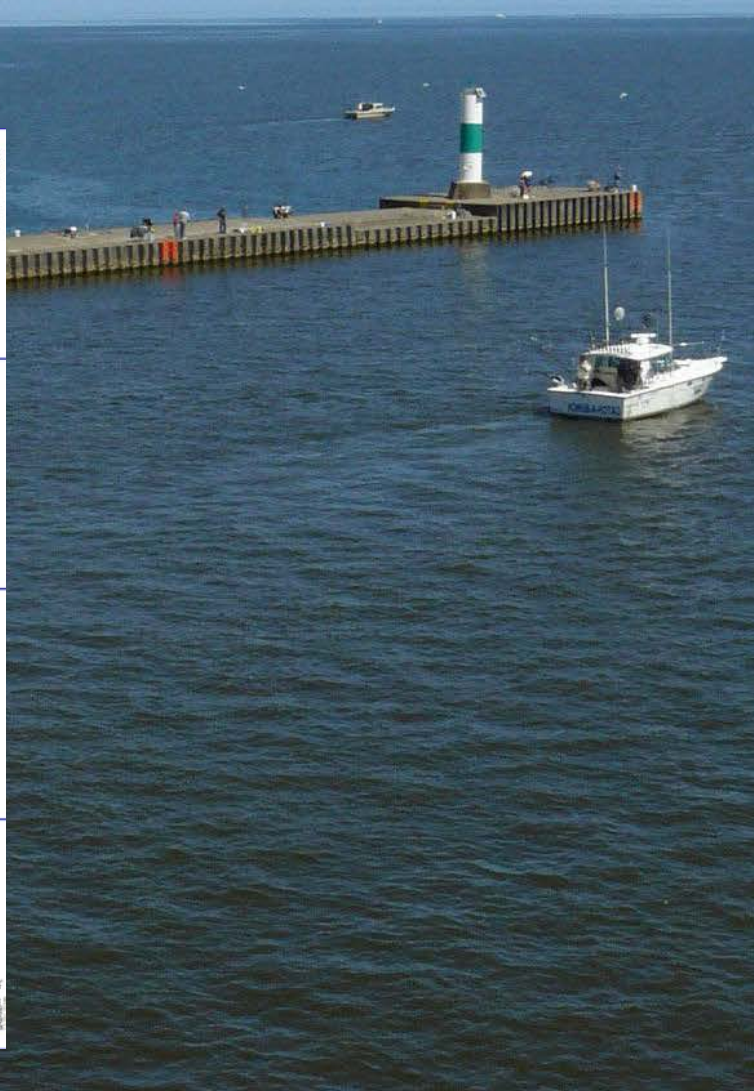
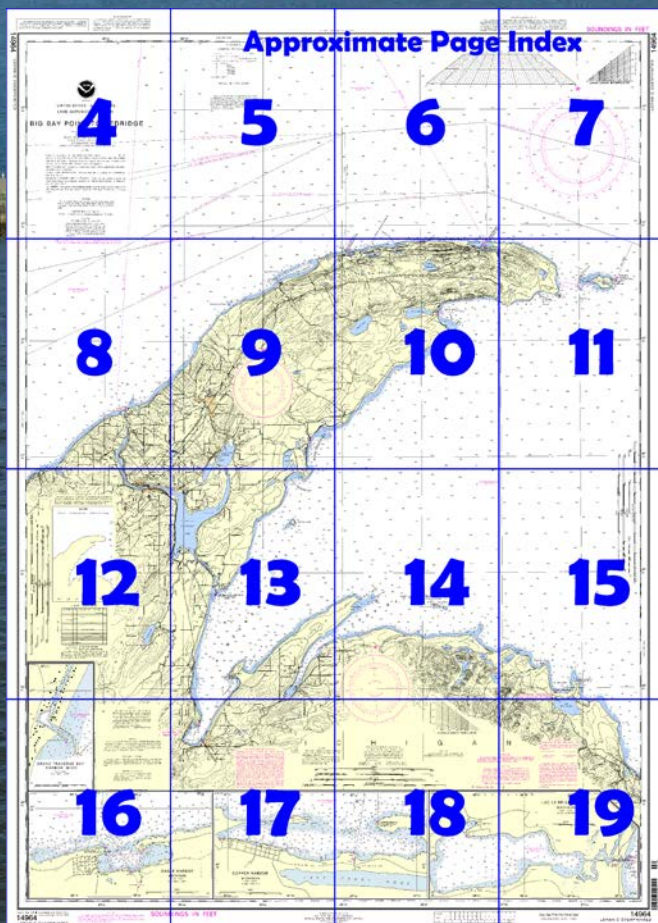


A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
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888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=14964>.



(Selected Excerpts from Coast Pilot)

Big Bay Point (46°50.6'N., 87°41.0'W.), marked by a light, is 22 miles northwest of Presque Isle Point. A shoal with a depth of 9 feet at the outer end extends 1.1 miles north from the point. A buoy marks the north end of the shoal. **Big Bay** is a deep bight enclosed by Big Bay Point on the east and **Salmon Trout Point** on the west. The south and west shores have deep water within 0.3 mile.

Big Bay Harbor is a small-craft harbor of refuge in the southwest corner of Big Bay.

Channels.—A dredged entrance channel leads from deep water in Big Bay between converging breakwaters to an inner harbor basin. The

outer ends of the east and west breakwaters are marked by a daybeacon and a light, respectively. In 2009, the controlling depth was 7 feet in the entrance channel to the basin, thence depths of 9½ to 10 feet were available in the basin.

A public docking facility developed by the Michigan State Waterways Commission is in the southwest corner of the basin. Transient berths, gasoline, water, electricity, sewage pump-out, launching ramp, and harbormaster services are available. The harbormaster monitors VHF-FM channels 16 and 9.

About 750 feet northwest of Big Bay Harbor W breakwater, submerged dock ruins, covered 3 to 9 feet, extend about 500 feet from shore. From Salmon Trout Point, the shore trends northwest for 8 miles to Huron River Point, thence 9 miles W to the south side of the mouth of Huron Bay. **Conway Point** and **Pine River Point**, 2 and 4 miles northwest of Salmon Trout Point, respectively, are prominent. The **Huron Mountains** rise close behind the shoreline. At **Huron River Point** (46°54.6'N., 87°54.0'W.), a shoal with depths of 8 to 10 feet at the outer end extends 1.5 miles NE. The shore in the remainder of this stretch is generally clear within 0.5 mile.

Huron Islands are a group of small islands centered 5 miles northwest of Huron River Point near the entrance to Huron Bay. The islands are all bold and deep-to except for the easternmost of the group, from which rocks awash extend 0.3 mile southeast. **Huron Island Light** (46°57.8'N., 87°59.9'W.), 197 feet above the water, is shown from a gray granite tower on a dwelling on the northwesternmost of the island group.

Huron Bay, extending about 12 miles southwest into the shoreline, is about 3 miles wide at the mouth and narrows to about 0.5 mile at the head. The bay has deep water within 0.5 mile of shore in the outer part, and the shores become deep-to in the inner part. **Point Abbaye** is the point at the outer end of the peninsula that separates the west side of Huron Bay from Keweenaw Bay. **Point Abbaye Reef**, with a depth of 6 feet at the outer end, extends 1.5 miles east from the point. Buoys mark the north and southeast edges of the reef.

Huron Bay Light marks the outer end of a small projection of land on the southeast side of the bay about 6 miles southwest of Point Abbaye.

Skaneateles, MI, is about 0.8 mile south of Huron Bay Light. A small-craft basin is between the light and village. In 1978, the reported controlling depths were 5½ feet in the entrance channel with 7 to 10 feet in the basin. Transient berths, gasoline, water, electricity, sewage pump-out facilities, and a launching ramp are available.

Keweenaw Bay extends about 22 miles southwest on the northwest side of Point Abbaye and is enclosed on the W by the inner end of the east side of Keweenaw Peninsula. The bay is 12 miles wide at the entrance and has a minimum width of 1.1 miles abreast Sand Point, about 2.3 miles from the head of the bay. The east shore of the bay has deep water within 0.4 mile and the west shore within 0.7 mile. A headland, 1 mile wide at the inner end and 2 miles wide at the outer end, extends 1.7 miles northwest from shore about 13 miles southwest of Point Abbaye. **Sand Bay** is the bight on the northeast side of the headland, and **Pequaming Bay** is the bight on the southwest side. **Sand Point**, marked by a light, is a projection from the west side of the bay about 2.3 miles from the head. A 1-foot shoal, marked on the southeast side by a buoy, extends 1,000 feet South from Sand Point. **L'Anse Bay** is the part of Keweenaw Bay above Sand Point. **Portage River** (see also chart 14972) flows into the west side of Keweenaw Bay about 13.5 miles west of Point Abbaye.

U.S. Coast Guard Rescue Coordination Center 24 hour Regional Contact for Emergencies

RCC Cleveland

Commander
9th CG District
Cleveland, OH

(216) 902-6117

Table of Selected Chart Notes

Pump-out facilities

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:



Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.

Covered wells may be marked by lighted or unlighted buoys.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:

○ (Accurate location) ◊ (Approximate location)

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

POTABLE WATER INTAKE (PWI)

Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93). Consult U.S. Coast Pilot 6 for important supplemental information.

Extreme Cases (Plan of Reference)

Low Water Datum, which is the plane of reference for the levels shown on the above hydrograph, is also the plane of reference for the charted depths. If the lake level is above or below Low Water Datum, the existing depths are correspondingly greater or lesser than the charted depths.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 6. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 9th Coast Guard District in Cleveland, Ohio, or at the Office of the District Engineer, Corps of Engineers in Detroit, Michigan.

Refer to charted regulation section numbers.

NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Marquette, Mi.	KIG-66	162.55 MHz (Chan. WX-1)
Houghton, Mi.	WXK-73	162.40 MHz (Chan. WX-2)

NOTE Z

NO-DISCHARGE ZONE, 40 CFR 140

Michigan waters of Lakes Michigan, Huron, Superior, Erie and St. Clair, all waterways connected thereto, and all inland lakes are designated as a No-Discharge Zone (NDZ). This chart falls entirely within the limits of a No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within a No-Discharge Zone (NDZ) are completely prohibited from discharging any sewage, treated or untreated, into the waters. Commercial vessel sewage shall include graywater. All vessels with an installed marine sanitation device (MSD) that are navigating, moored, anchored, or docked within a NDZ must have the MSD disabled to prevent the overboard discharge of sewage (treated or untreated) or install a holding tank. Regulations for the NDZ are contained in the U.S. Coast Pilot. Additional information concerning the regulations and requirements may be obtained from the Environmental Protection Agency (EPA) web site: http://www.epa.gov/owow/oceans/vessel_sewage/vsdnozone.html.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot 6 for details.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

CAUTION

Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.

NOTE B

The channel legend reflects the Corps of Engineers project depth. The Corps of Engineers publishes the controlling depth periodically in the U.S. Coast Guard Local Notice to Mariners. For further information on channel depths, direct inquiries to Office of the District Engineer, Corps of Engineers, Detroit, Michigan.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.270" southward and 0.442" westward to agree with this chart.

SOURCE DIAGRAM

Most of the hydrography identified by the letter "I" was surveyed by the U.S. Army Corps of Engineers prior to 1974. Channels currently maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Canadian Shipowners Association.

6

LOTRAN-C

GENERAL EXPLANATION

LOTRAN-C FREQUENCY 100MHz

PULSE REPETITION INTERVAL 89.700 Microseconds

STATION TYPE DESIGNATORS (Not individual station letter designators)

M Master

W Secondary

X Secondary

Y Secondary

Z Secondary

EXAMPLE 8970-Y

RATES ON THIS CHART

8970-X 8970-Y

6

LOTRAN-C

GENERAL EXPLANATION

LOTRAN-C FREQUENCY 100MHz

PULSE REPETITION INTERVAL 89.700 Microseconds

STATION TYPE DESIGNATORS (Not individual station letter designators)

M Master

W Secondary

X Secondary

Y Secondary

Z Secondary

EXAMPLE 8970-Y

6

LOTRAN-C

GENERAL EXPLANATION

LOTRAN-C FREQUENCY 100MHz

PULSE REPETITION INTERVAL 89.700 Microseconds

STATION TYPE DESIGNATORS (Not individual station letter designators)

M Master

W Secondary

X Secondary

Y Secondary

Z Secondary

EXAMPLE 8970-Y

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum) 601.1 ft.
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

SAILING DIRECTIONS. Bearings of sailing courses are true and distances given thereon are in statute miles between points of departure.

AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water Datum, bridge and overhead clearances are reduced correspondingly. For clearances see U.S. Coast Pilot 6.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.270" southward and 0.442" westward to agree with this chart.

LORAN-C OVERPRINTED



UNITED STATES - GREAT LAKES
LAKE SUPERIOR-MICHIGAN

BIG BAY POINT TO REDRIDGE

Polyconic Projection
Scale 1:120,000
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET --
Additional information can be obtained at nauticalcharts.noaa.gov.

NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum) 601.1 ft.
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985).

SAILING DIRECTIONS. Bearings of sailing courses are true and distances given thereon are in statute miles between points of departure.

AIDS TO NAVIGATION. Consult U. S. Coast Guard Light List for supplemental information concerning aids to navigation.

SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1.

BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water Datum, bridge and overhead clearances are reduced correspondingly. For clearances see U.S. Coast Pilot 6.

AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U. S. Coast Guard.

CAUTION

Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged, particularly in the near shore areas. Mariners should proceed with caution.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 6 for important supplemental information.

CAUTION

POTABLE WATER INTAKE (PWI)

Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93). Consult U. S. Coast Pilot 6 for important supplemental information.

Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Canadian Shipowners Association.

Joins page 8

See Note on page 5.

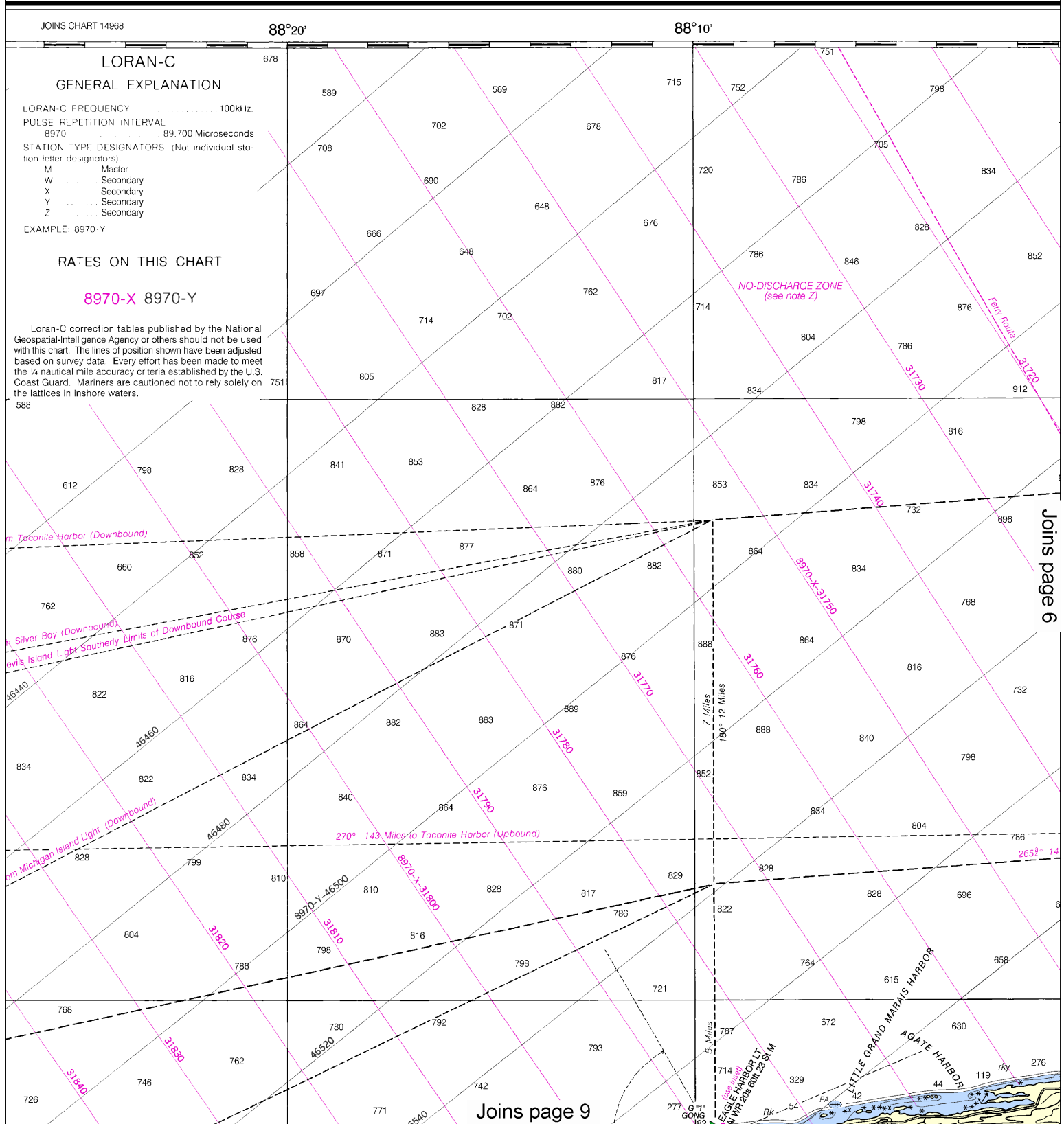
Note: Chart grid lines are aligned with true north!

Printed at reduced scale.

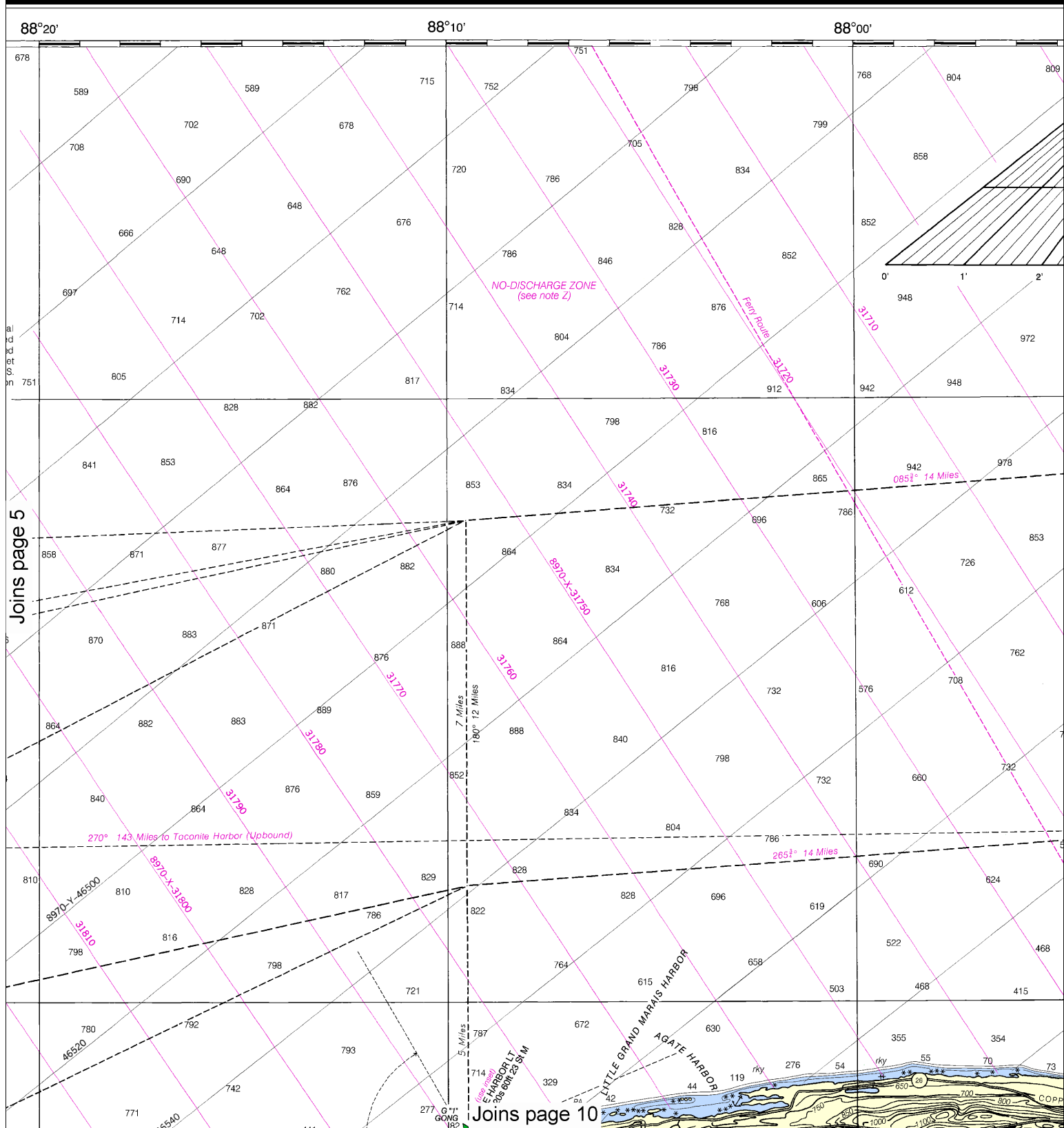
YARDS

STATUTE MILES

4



This BookletChart was reduced to 75% of the original chart scale.
 The new scale is 1:160000. Barscales have also been reduced and
 are accurate when used to measure distances in this BookletChart.



5000 2500 0 5000 10000 15000

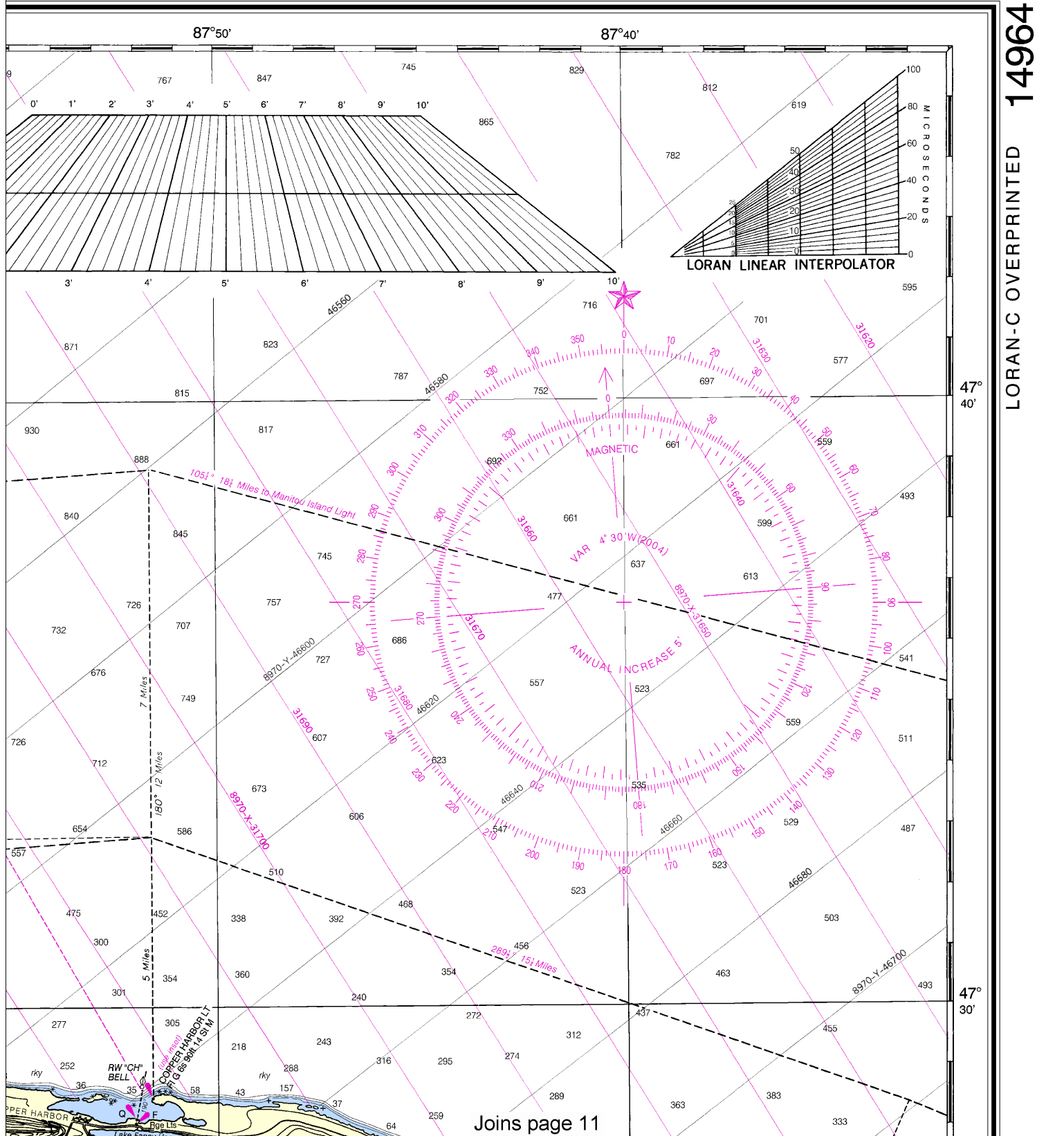
0 1 2 3 4 5 6 7 8 9 10 11 12 13

STATUTE MILES

PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, <http://NauticalCharts.gov>, help@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART, <http://OceanGrafix.com>, or help@OceanGrafix.com.

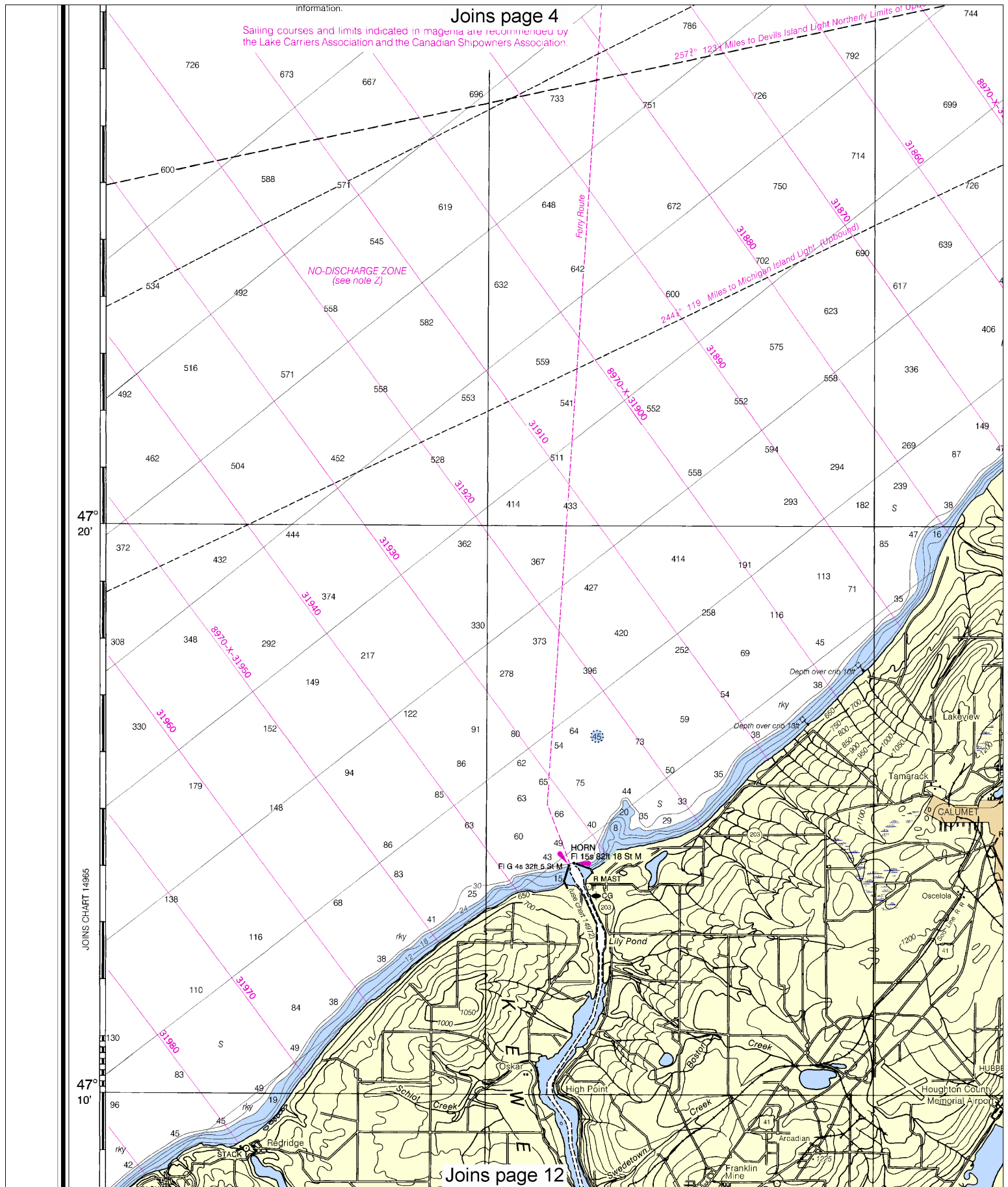
SOUNDINGS IN FEET



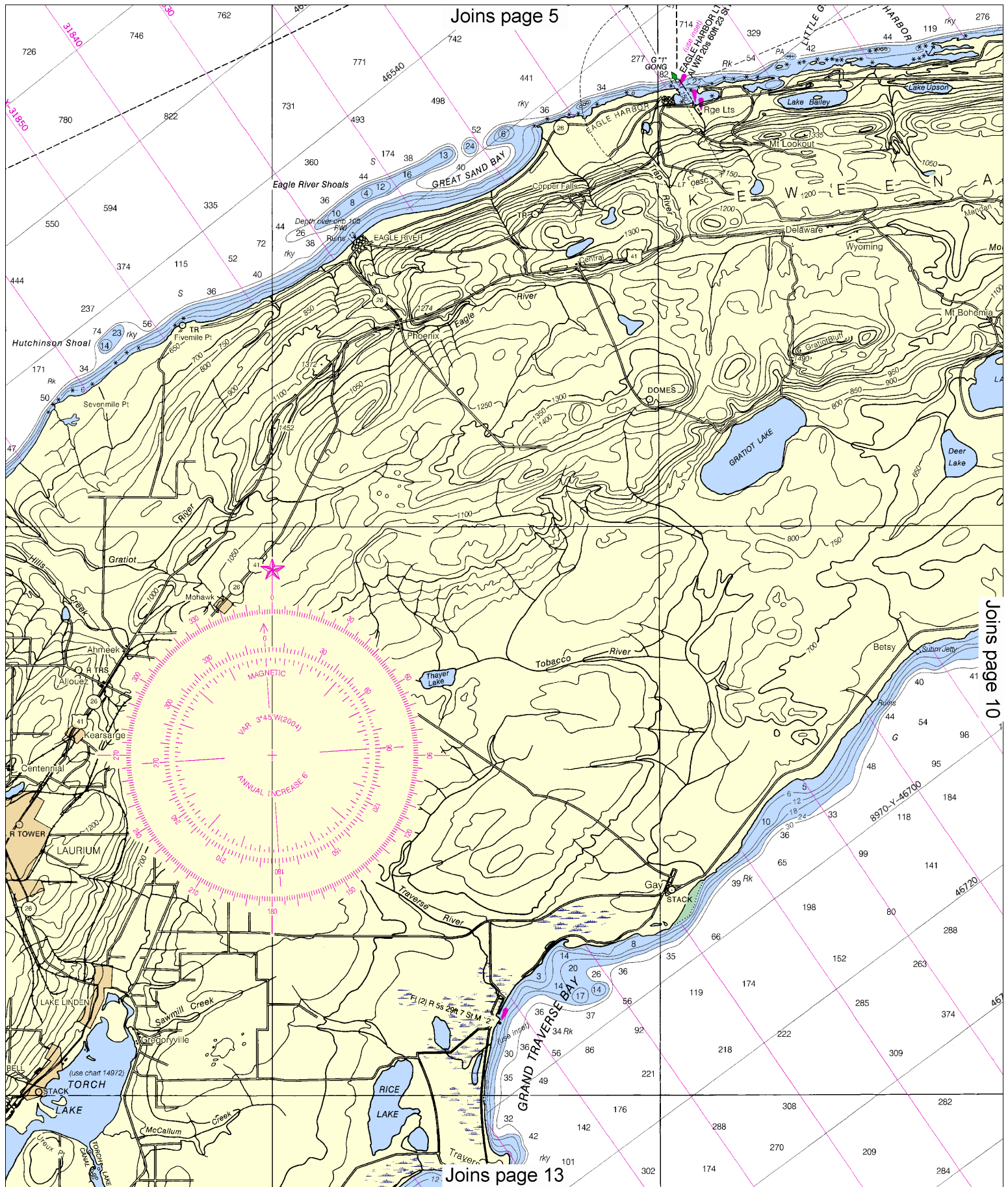
This BookletChart has been updated through: Coast Guard Local Notice To Mariners: 4712 11/20/2012,
 NGA Weekly Notice to Mariners: 4812 12/1/2012,
 Canadian Coast Guard Notice to Mariners: 1012 10/26/2012.

LORAN-C OVERPRINTED 14964

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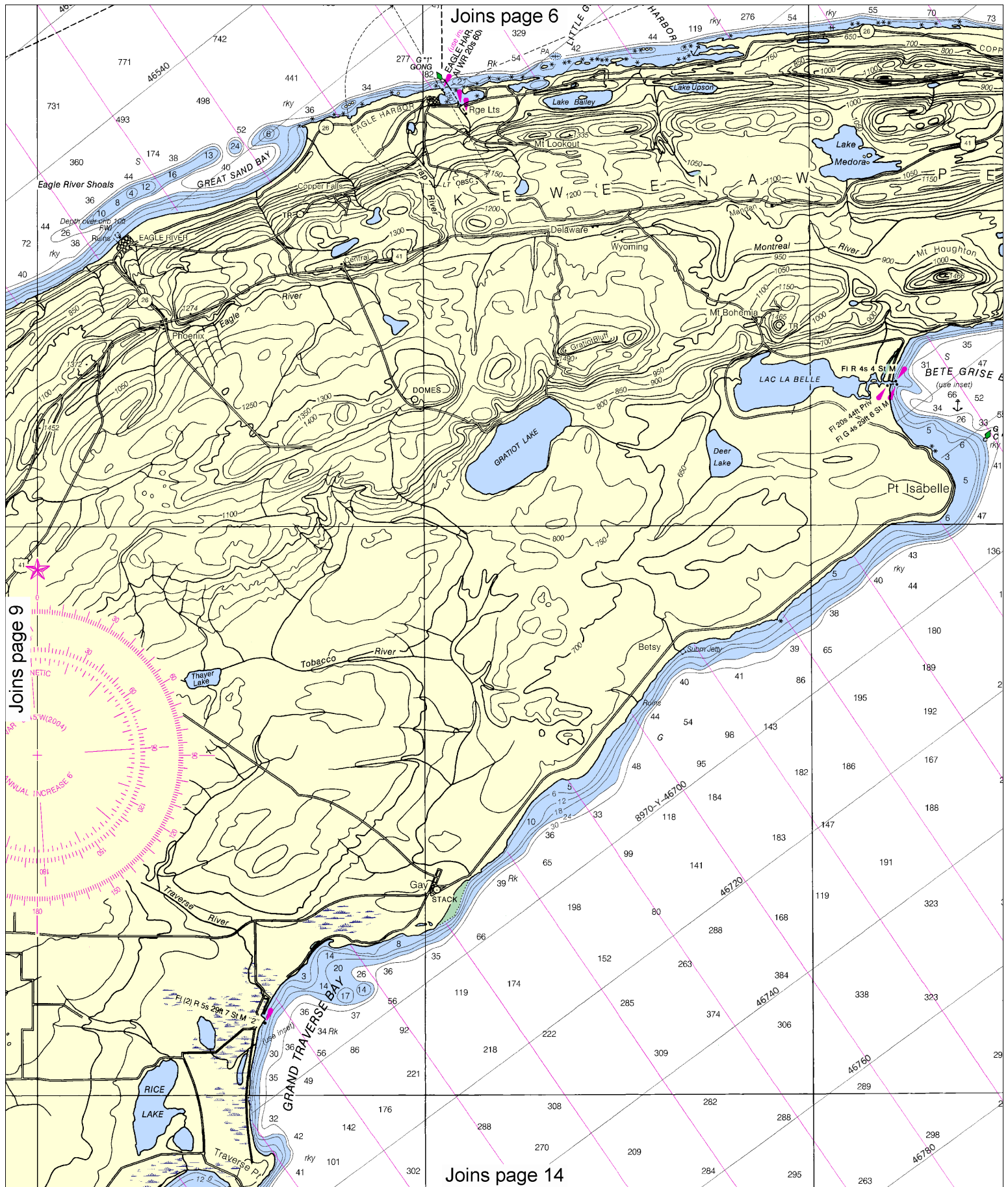
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Joins page 5

Joins page 10

Joins page 13



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Note: Chart grid lines are aligned with true north.

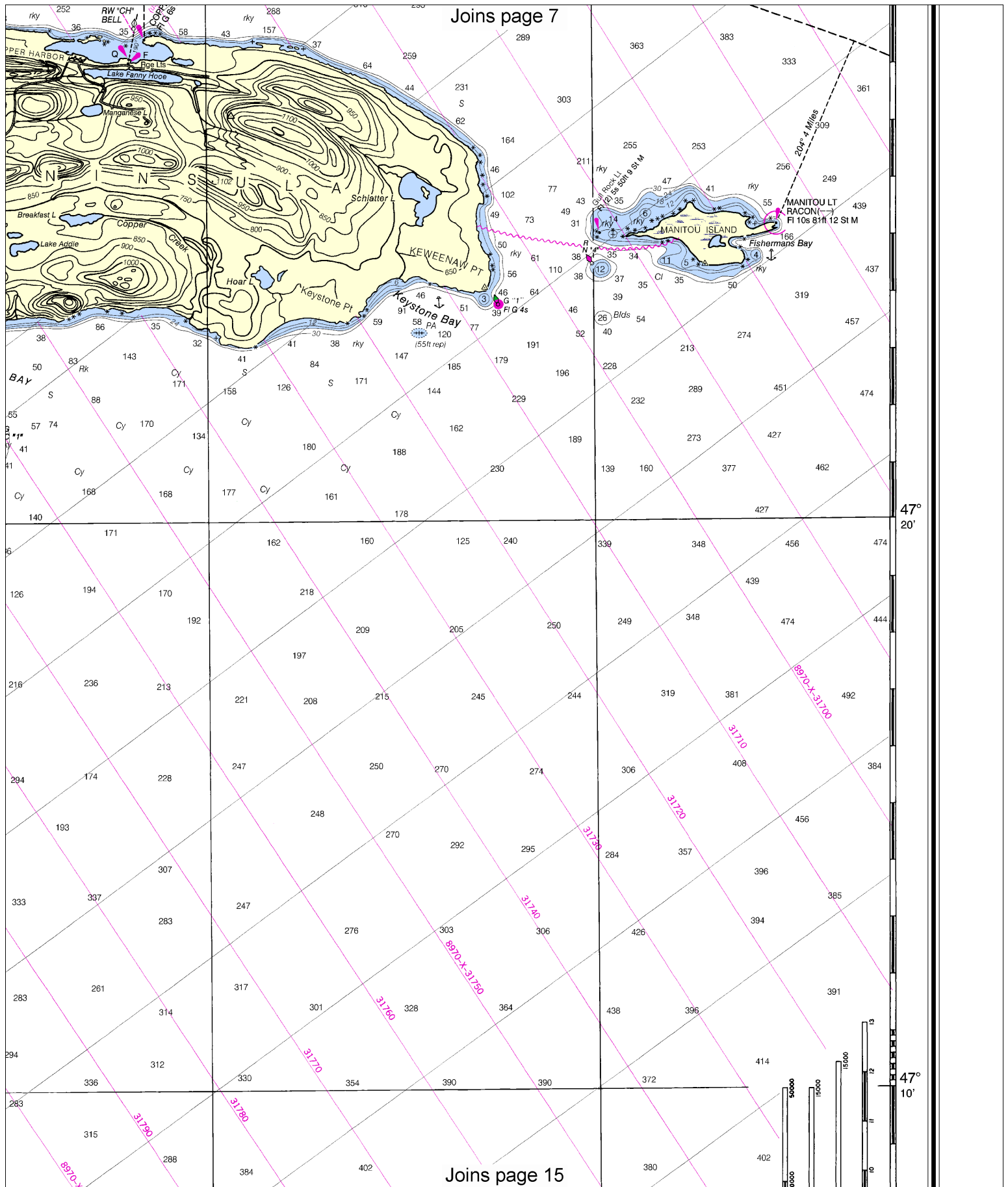
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YARDS

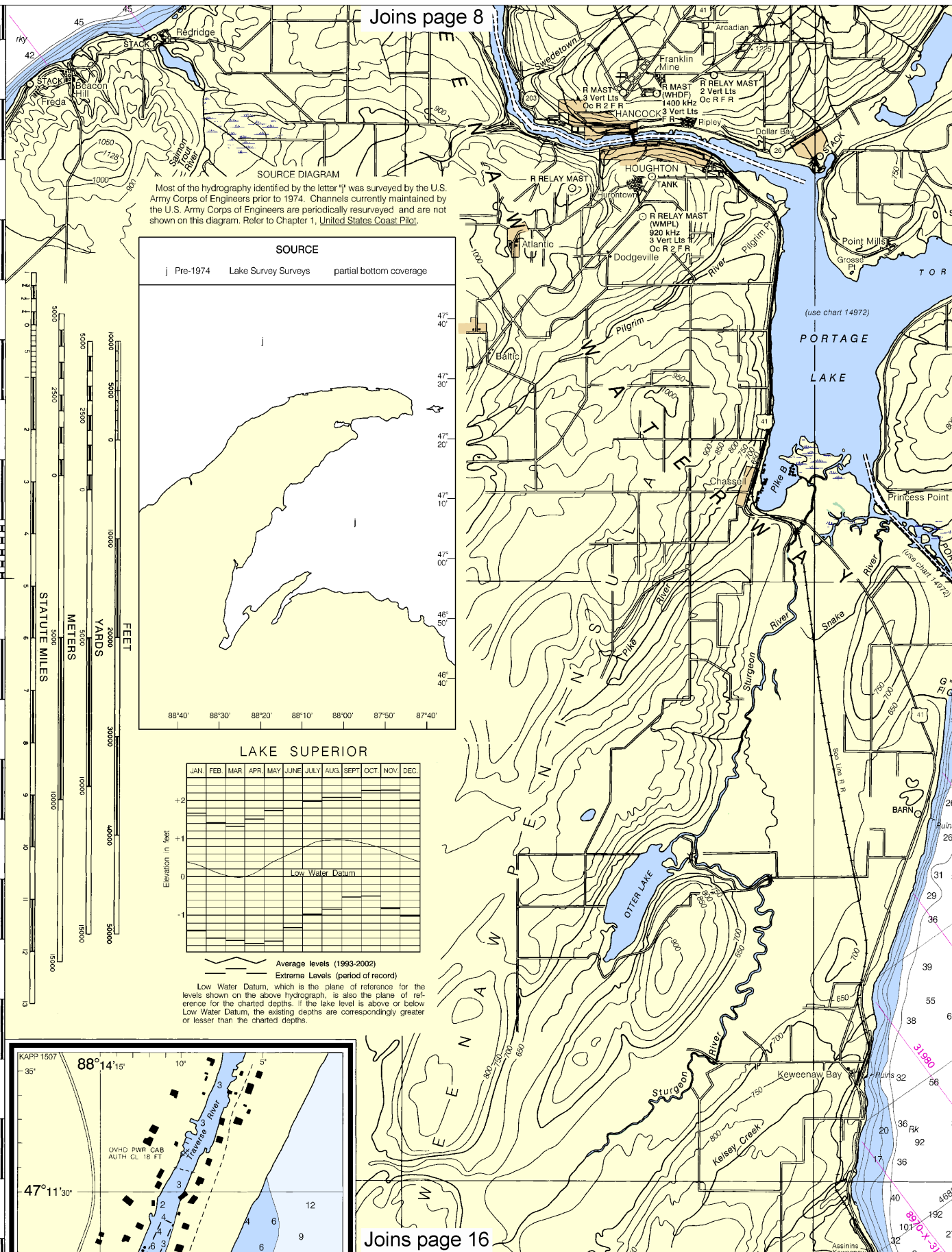
See Note on page 5.

STATUTE MILES



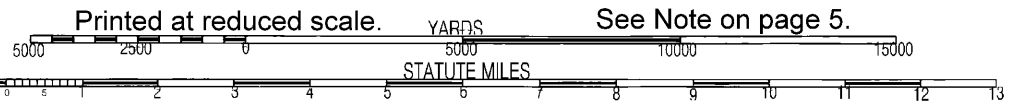


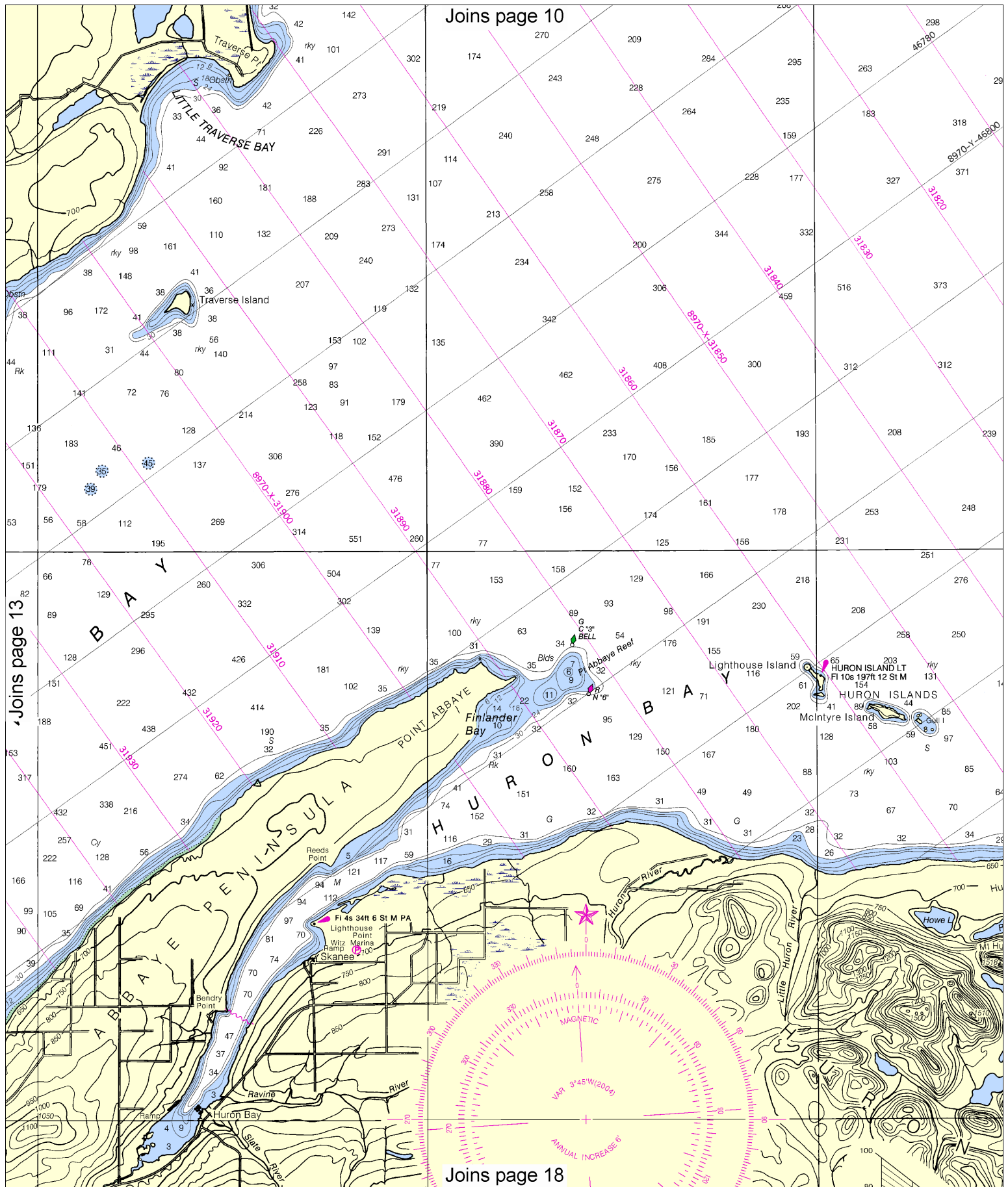
Joins page 8



12

Note: Chart grid lines are aligned with true north.





Note: Chart grid lines are aligned with true north.

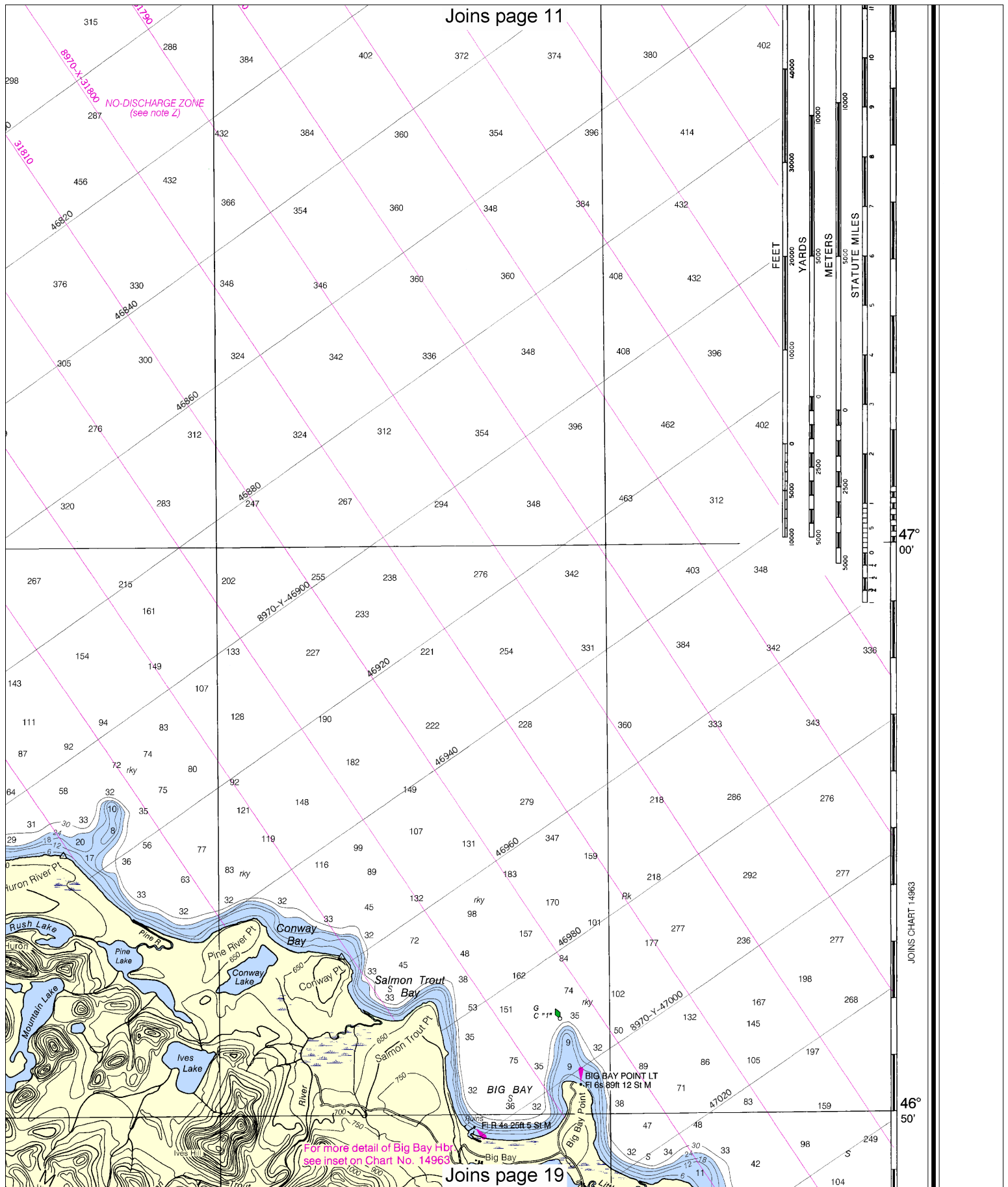
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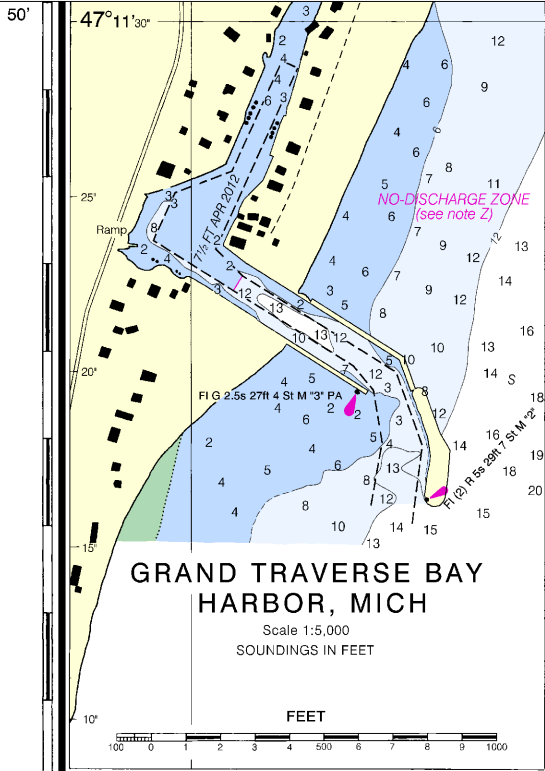
YARDS

See Note on page 5.

STATUTE MILES







Joins page 12

CAUTION
Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution. Station positions are shown thus:
○ (Accurate location) ○ (Approximate location)

NOTE B

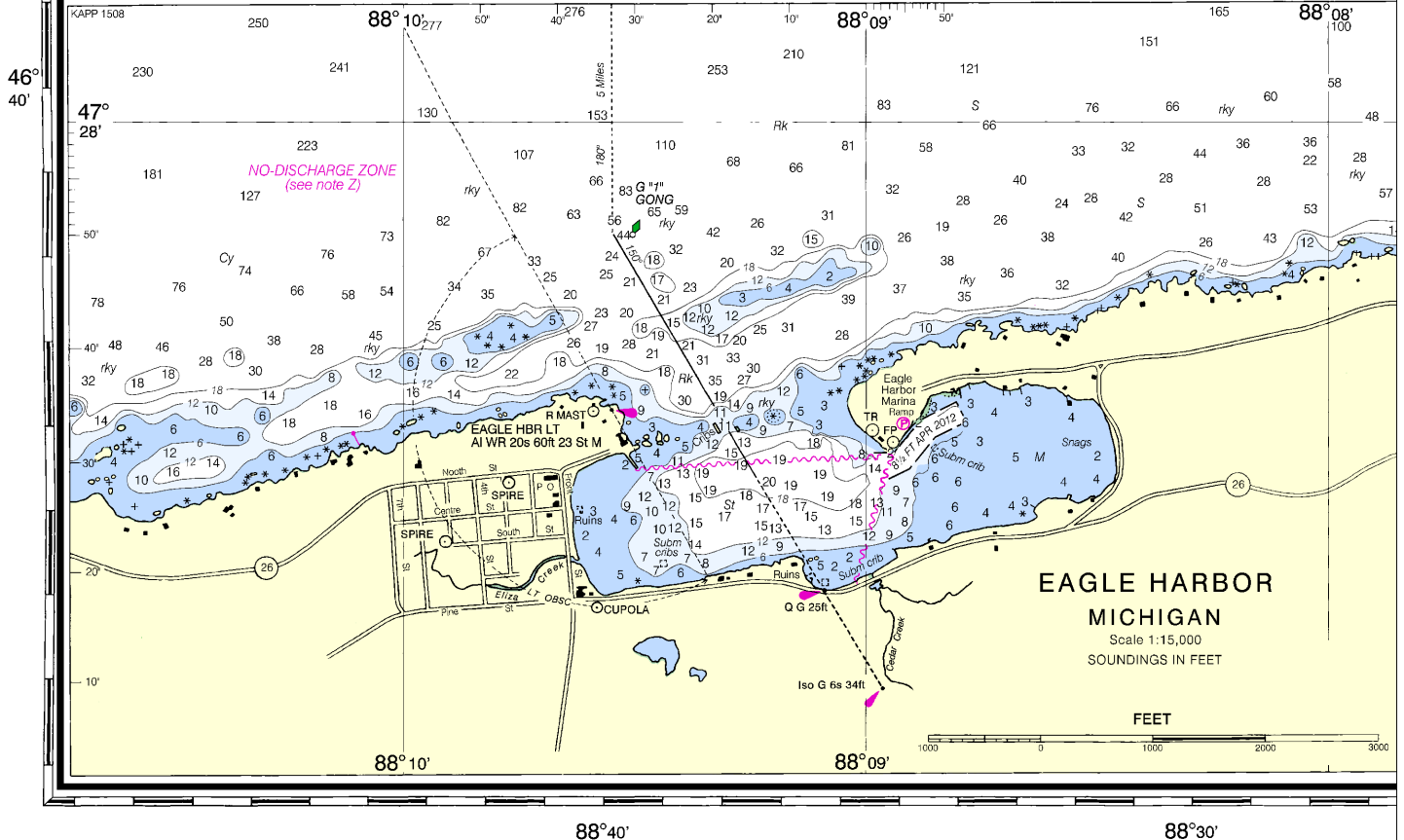
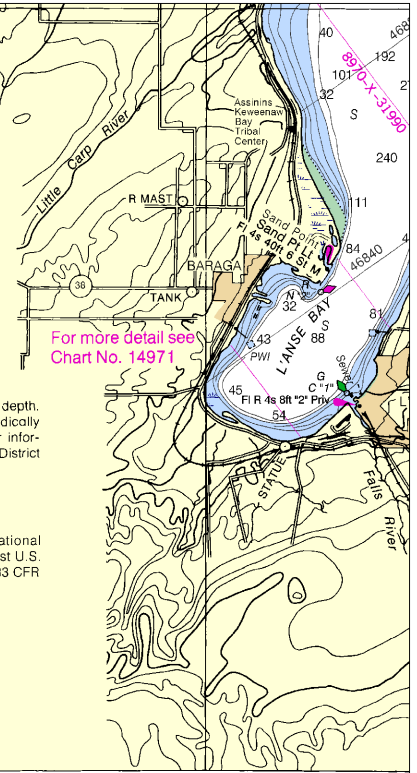
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POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.



21st Ed., Mar./04 ■ Corrected through NM Mar. 13/04
Corrected through LNM Dec. 16/03

14964

LORAN-C OVERPRINTED

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

SOUNDINGS IN FEET

16

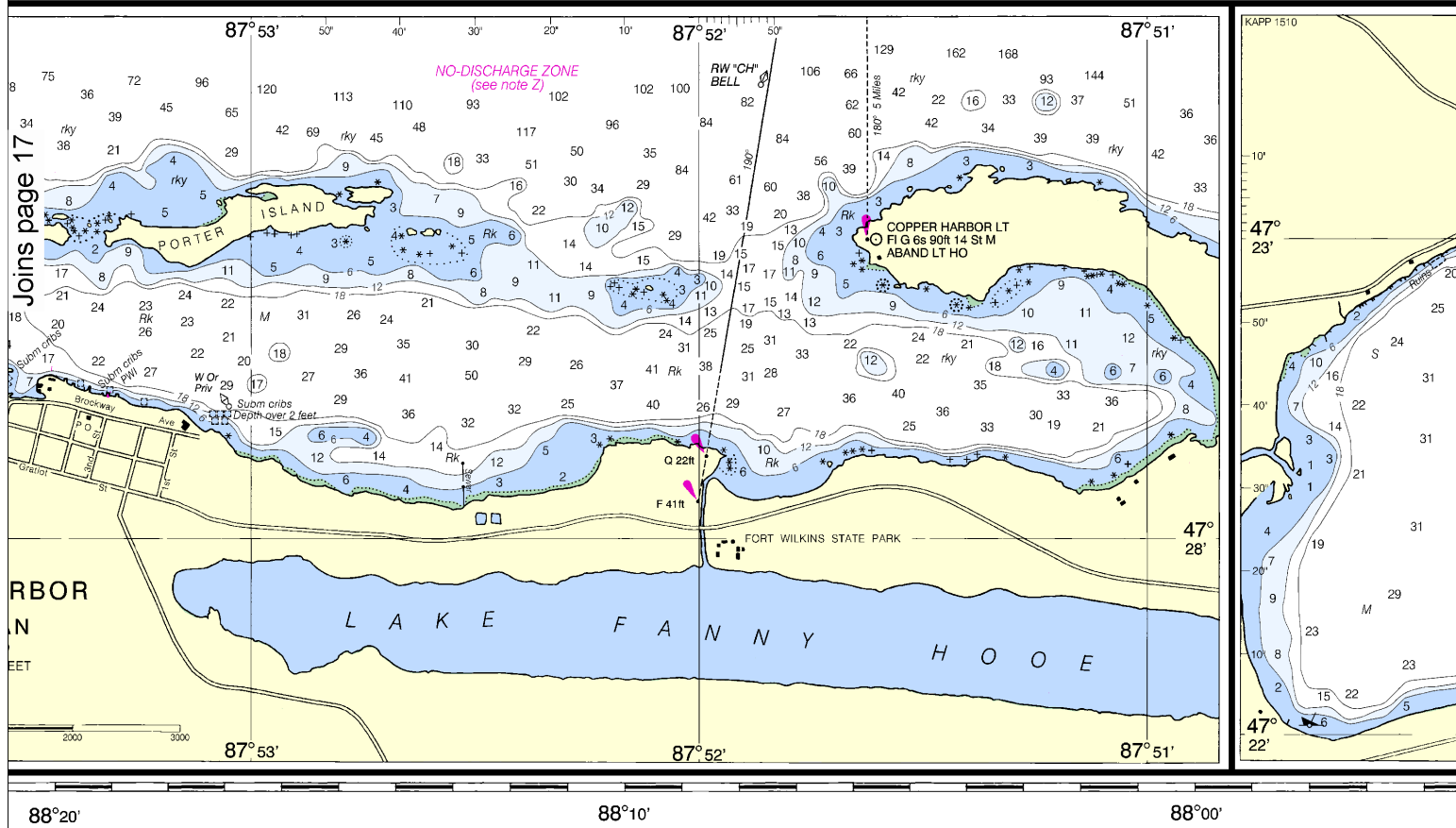
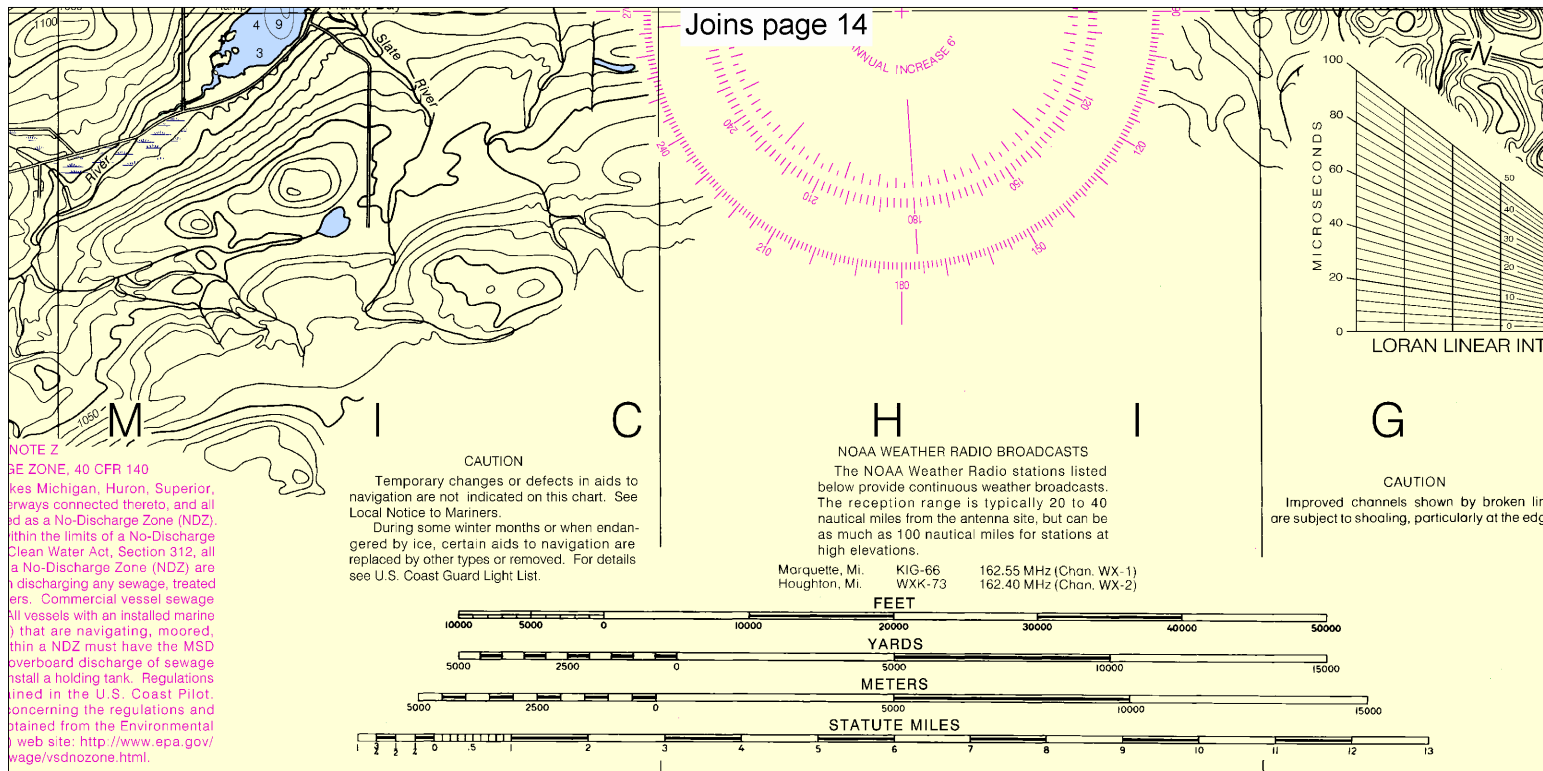
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

YARDS

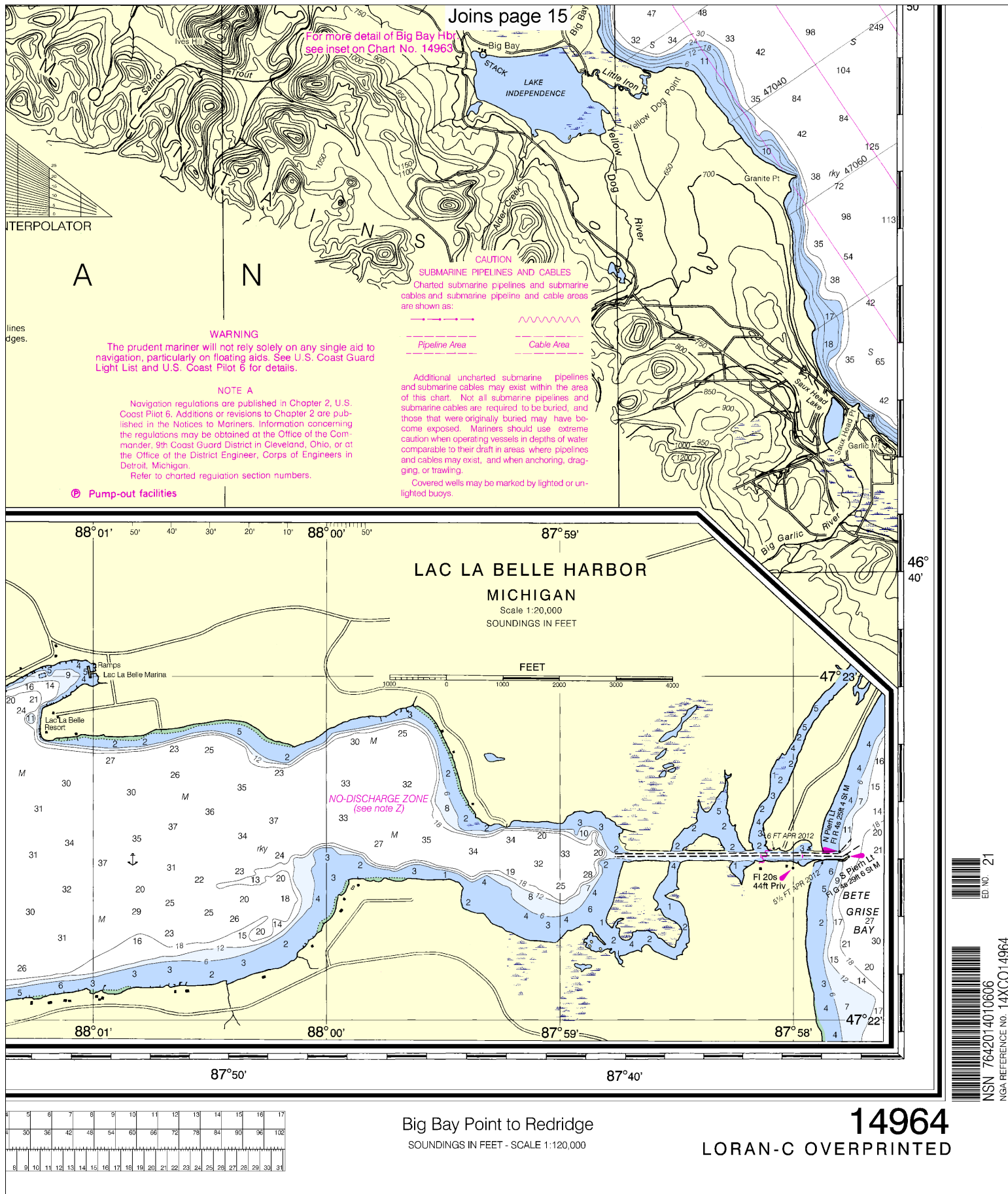
See Note on page 5.

STATUTE MILES



Published at Washington, D.C.
 U.S. DEPARTMENT OF COMMERCE
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL OCEAN SERVICE
 COAST SURVEY

FATHOMS	1	2	3	4
FEET	6	12	18	24
METERS	1	2	3	4





VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

Quick References

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Chart and chart related inquiries and comments	—	http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
Chart updates (LNM and NM corrections)	—	http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
Coast Pilot online	—	http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
Tides and Currents	—	http://tidesandcurrents.noaa.gov
Marine Forecasts	—	http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center	—	http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions	—	http://www.nowcoast.noaa.gov/
National Weather Service	—	http://www.weather.gov/
National Hurricane Center	—	http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center	—	http://ptwc.weather.gov/
Contact Us	—	http://www.nauticalcharts.noaa.gov/staff/contact.htm



— For the latest news from Coast Survey, follow @nauticalcharts



This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

NOAA's Office of Coast Survey



The Nation's Chartmaker